SIMULATED REEL IMPERFECTIONS

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority under 35 U.S.C. §119(e) to U.S. Provisional Patent Application No. 60/858,741 filed on Nov. 13, 2006, which is incorporated herein by reference in its entirety for all purposes.

FIELD OF THE INVENTION

[0002] This invention relates to gaming machines. In particular, embodiments described herein relate to video data, for output on a gaming machine, that simulates visible imperfections commonly seen in a mechanically driven reel slot machine.

BACKGROUND

[0003] As technology in the gaming industry progresses, the traditional mechanically driven reel slot machines are being replaced by electronic machines having LCD video displays or the like. Processor-based gaming machines are becoming the norm. Part of the reason for their increased popularity is the nearly endless variety of games that can be implemented using processor-based technology. These gaming advancements enable the operation of more complex graphics and games, including video clips from movies and bonus games with custom animation, which would not possible on mechanical-driven gaming machines. The increasing cost of designing, manufacturing, and maintaining complex mechanical gaming machines has also motivated the casinos and gaming industry toward video-based replacements.

OVERVIEW

[0004] The present invention provides a gaming machine configured to output video data that simulates mechanical reels in a traditional mechanical slot machine. Embodiments described herein contribute to the emulation of a mechanical machine by simulating one or more visible mechanical imperfections commonly found in a mechanical reel machine.

[0005] In one aspect, the present invention relates to a gaming machine. The gaming machine includes a display device and a cabinet defining an interior region of the gaming machine. The cabinet is adapted to house a plurality of gaming machine components within or about the interior region. The display device is disposed within or about the interior region and configured to output a visual image in response to a control signal. The gaming machine includes at least one processor configured to execute instructions, from memory, that: a) permit game play, on the gaming machine and using the display device, of a game of chance with multiple video reels displayed by the display device; and b) display video data, on the display device, that includes one or more simulated visible mechanical imperfections of a mechanical reel in a gaming machine.

[0006] In another aspect, the present invention relates to a gaming machine with layered displays. The gaming machine includes a first display device, disposed within or about the interior region, that is configured to output a visual image in response to a control signal and includes one or more controllably transparent portions. The gaming machine also includes a second display device, arranged relative to the first display device such that a common line of sight passes through a portion of the first display device to a portion of the second display device, and arranged inside the first display device. The gaming machine further includes at least one processor configured to execute instructions, from memory, that: a) permit game play, on the gaming machine and using the second display device, of a game of chance with multiple video reels displayed by the second display device, and b) display video data, on the second display device, that includes one or more simulated visible mechanical imperfections of a mechanical reel in a gaming machine.

[0007] In yet another aspect, the present invention relates to a method of providing a game of chance on a gaming machine, the method includes displaying the game of chance on a video display device included in the gaming machine, wherein the game of chance includes a set of video reels. The method also includes, during the game, simulating the movement of symbols on each video reel in the set of video reels on the display device. The method further includes, for one or more of the video reels in the set of video reels, displaying video data, on the display device, that simulates one or more visible mechanical imperfections of a mechanical reel in a gaming machine.

[0008] In another embodiment, the present invention relates to logic encoded in one or more tangible media for execution and, when executed, operable to provide a game of chance on a gaming machine.

[0009] These and other features and advantages of the invention will be described in more detail below with reference to the associated figures.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. **1** shows simulated jitter of a video reel in accordance with one embodiment.

[0011] FIG. **2** shows simulated reel kick-back of a video reel in accordance with another embodiment.

[0012] FIG. **3** shows video for five reels with different speeds in accordance with another embodiment.

[0013] FIG. **4**A shows layered displays in a gaming machine in accordance with one embodiment.

[0014] FIG. **4**B shows layered displays in a gaming machine in accordance with another embodiment.

[0015] FIG. **4**C shows another layered video display device arrangement in accordance with a specific embodiment.

[0016] FIG. **5**A shows video output on layered displays and configured to realistically simulate mechanical reels in accordance with one embodiment.

[0017] FIG. **5**B shows the video output of FIG. **5**A separated into front and back video for display on front and back displays, respectively, in accordance with one embodiment.

[0018] FIGS. **6**A and **6**B illustrate a gaming machine in accordance with a specific embodiment.

[0019] FIG. **7** illustrates a control configuration for use in a gaming machine in accordance with another specific embodiment.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0020] The present invention will now be described in detail with reference to a few preferred embodiments thereof as illustrated in the accompanying drawings. In the following description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be apparent, however, to one skilled in the art, that the